

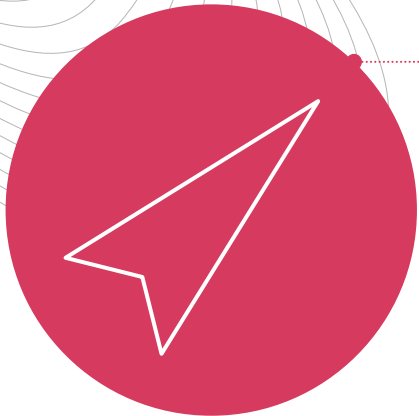


Emerging communication assistive technology

1,599

patent families for emerging communication assistive technology filed across **39 patent offices**

What technologies are involved?



Navigation aids
1,093 (68%)



Sensory substitution aids
236 (15%)



Brain-computer interface
175 (11%)



Smart assistants
128 (8%)



Recent growth has been primarily driven by **China-based inventors**, who accounted for 50% of the patent documents filed since 2013.

Which are the fastest growing technologies?

Sensory substitution aids is the fastest growing category with **71%** average annual growth rate between 2013 and 2017

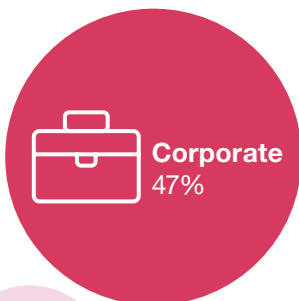
Brain-computer interface applications for controlling computing devices grew on average by **20%** and **navigation aids** by **18%** between 2013 and 2017

Who is filing?

Applicant sector



Individuals
27%



Corporate
47%



Academia
25%

Top patent applicants

IBM (U.S.)	32
Panasonic (Japan)	16
NEC (Japan)	14
Hitachi (Japan)	11
Toshiba (Japan)	10
Mitsubishi Electric (Japan)	10